BEFORE THE

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

IN THE MATTER OF	)	
	)	
IMPLEMENTATION OF THE LOCAL	)	
COMPETITION PROVISIONS IN THE	)	CC DOCKET 96-98
TELECOMMUNICATIONS ACT OF 1996	)	
	)	
	)	

COMMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING

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MAY 16, 1996

SUMMARY

The Telecommunications Industry Association ("TIA"), which has a membership of nearly 600 U.S. companies which manufacture and/or provide communications and information technology equipment, products, systems, distribution services and professional services throughout the world, believes that the adoption of strong interconnection rules by the Commission will facilitate the development of *facilities-based* local exchange competition, which is one of the central objectives of the Telecommunications Act of 1996. The development of *facilities-based* competition will encourage the demand for new telecommunications equipment and expand the market opportunities available to domestic manufacturers of telecommunications equipment

In the comments which follow, the TIA addresses four issues that it considers to be both critically important and directly relevant to the interests of its members. These include:

- the appropriateness of uniform national rules for interconnection and unbundling;
- what constitutes a "technically feasible" point for interconnection;
- the nature and scope of rules regarding unbundling and access to network elements; and
- the nature and scope of requirements regarding disclosure by incumbent LECs of technical changes affecting the use and interoperability of their local exchange facilities and networks

In the course of addressing these issues, the TIA urges the Commission to:

- develop uniform rules for interconnection and unbundling so as to promote predictability and certainty and facilitate market-entry;
- adopt a flexible definition of what constitutes a "technically feasible" point for interconnection;
- prescribe unbundling requirements that will enable and encourage the development of *facilities-based* competition in the provision of local exchange service; and
- adopt rules requiring reasonable, timely, and non-discriminatory access to information regarding technical changes in incumbent LEC network design or configuration.

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Implementation of the Local Competition	)	
Provisions in the Telecommunications Act	)	CC Docket No. 96-98
of 1996	)	
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Comments of the Telecommunications Industry Association
in Response to
Notice of Proposed Rulemaking

The Telecommunications Industry Association ("TIA") hereby submits the following comments in response to the Notice of Proposed Rulemaking ("NPRM") adopted by the Commission in the above-captioned proceeding. The TIA has a membership of nearly 600 U.S. companies which manufacture and/or provide communications and information technology equipment, products, systems, distribution services and professional services throughout the world.

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While there are a great many issues raised by the Commission in its NPRM, there are several that the TIA considers to be both critically important and directly relevant to the interests of its members. Accordingly, the TIA intends to limit its comments in this initial round to the following issues:

- the appropriateness of uniform national rules for interconnection and unbundling;
- what constitutes a "technically feasible" point for interconnection;

- the nature and scope of rules regarding unbundling and access to network elements; and

- the nature and scope of requirements regarding disclosure by incumbent LECs of technical changes affecting the use and interoperability of their local exchange facilities and networks.

The TIA's interest in this matter is directly related to its belief that the adoption of strong interconnection rules by the Commission will facilitate the development of facilities-based local exchange competition, which will in turn encourage demand for new equipment and expand the market opportunities available to domestic manufacturers of telecommunications equipment.[1]

I. Uniform National Rules Are Essential to Promote Facilities-Based Competition

The authors of the Telecommunications Act of 1996 ("1996 Act") stated that the purpose of the legislation is "to provide for a pro-competitive, de-regulatory *national* policy framework designed to accelerate rapidly private sector deployment of advanced telecommunications and information technologies and services . . ." (emphasis added).[2] In furtherance of this objective, the Congress adopted an approach which emphasizes and actively seeks to promote the development of *facilities-based* competition in the provision of local telecommunications services.

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[1]Domestic manufacturers last year had revenues totaling $62 billion, exports totaling $16.2 billion, and a positive balance of trade of almost $4 billion. Source for data: U.S. Department of Commerce.

[2]S. Rept. 230, 104th Congress, 2nd Session, at 1 (1996).

Congress's desire to facilitate the development of "two-wire" competition is evident in the 1996 Act's telco/cable anti-buyout provisions, its preemption of state and local barriers to the deployment and use of competitive local networks, its interconnection and access requirements, and its establishment of facilities-based competition as a pre-condition to regional Bell Operating Company provision of interLATA services within their respective regions.[3] As Representative Dan Schaefer noted during the House Subcommittee on Telecommunications' hearings on H.R 1555, it "is no exaggeration to say that the entire bill is premised on the existence of robust *facilities-based* competition" (emphasis added).[4]

While 47 U.S.C. 251 (c)(4) allows a new entrant to provide competitive local service by obtaining and reselling an incumbent LEC's existing services so as to provide service without the use of, or need for, alternative infrastructure, the interconnection and unbundling provisions of 47 U.S.C. 251 (c)(2) and (c)(3) were designed to facilitate facilities-based competition in various forms. As the Commission indicates in its NPRM, interexchange carriers and competitive access providers may provide one form of facilities-based competition by combining their own facilities with unbundled loops and other network elements obtained from an incumbent LEC and augmenting their own loop facilities over time.[5] In contrast, cable systems

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[3]The 1996 Act states that a Bell operating company may not be authorized to provide in-region interexchange service unless it faces competition from a facilities-based competitor which offers service "either exclusively" or "predominantly" over its own telephone exchange service facilities. See 47 U.S.C. 271 (c)(1)(A).

[4]Communications Law Reform, Hearings before the House Subcommittee on Commerce, 104th Congress, 1st Session, H. Rpt. No. 104-34, at 9 (1995).

[5]NPRM, ¶ 9.

may choose to develop more extensive local networks in a more compressed time-frame by upgrading their existing cable infrastructure to offer telephony services.[6] However, while cable-based telephony providers may require fewer unbundled elements from incumbent LECs, they will at a minimum require interconnection and termination arrangements, as well as the capability to purchase network elements or resell incumbent LEC services to subscribers in areas not covered by their own networks, in order to become viable competitors in the provision of local telephone service.[7] As the Commission has noted, 47 U.S.C. 251 (c)(2) provides a mechanism for potential competitors to secure necessary interconnection to an incumbent LEC's network, while 47 U.S.C. 251 (c)(3) provides a basis for new entrants to combine their own switches and transport facilities with incumbent LEC loops in order to serve end users.[8]

In order to facilitate the emergence of facilities-based competition in local telephony, it is essential that the Commission use its authority under the Communications Act, as amended, to develop uniform national rules for implementation of the interconnection and access requirements imposed on incumbent LECs under Section 251 (c)(2) and (c)(3) of the Act. It is clear from the legislative history of the 1996 Act that one of the Congress's goals in crafting and passing comprehensive telecommunications reform legislation was to provide certainty and predictability, which congressional leaders recognized as essential if communications service

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[6]Id.

[7]Id.

[8]NPRM, ¶ 15, n. 29.

providers are to make significant investments in new infrastructure.[9] Uniform national rules regarding interconnection will promote certainty and predictability, and thereby facilitate market entry and investment in new telecommunications infrastructure.[10]

It also is clear from the legislative history of the 1996 Act that the Congress intended to take telecommunications policy-making responsibility away from the Federal courts[11] and to establish "a pro-competitive, deregulatory *national* policy framework" (emphasis added), to be implemented in accordance with rules established by the Commission pursuant to Section 251 (d)(1) of the Communications Act, as amended.[12] As the Commission has observed, in the absence of uniform national rules, state commissions and Federal courts would be left without

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[9]See Statements of Senate Majority Leader Dole and House Telecommunications Subcommittee Chairman Fields, Hearing before the Senate Committee on Commerce, Science and Transportation, 104th Congress, 1st Session, S. Hrg. 104-302, at 27 and 40 (1995).

[10]As the Commission has recognized, "[e]xplicit national rules implementing section 251 can be expected to reduce the capital costs of, and attract investment in, new entrants by enhancing the ability of the investment community to assess a new entrant's business plan." NPRM, ¶ 30. Similarly, the adoption of uniform national interconnection rules should facilitate investment in firms engaged in the manufacture and supply of equipment used to provide competitive local exchange services.

[11]See Statements of Senate Majority Leader Dole and House Commerce Committee Chairman Bliley, Hearing before the Senate Committee on Commerce, Science and Transportation, 104th Congress, 1st Session, S. Hrg. 104-302, at 23, 27, and 34 (1995). Also, 141 Congressional Record S8013 (Statement of Senate Commerce Committee Chairman Pressler), H8286 (Statement of Representative Oxley, Vice Chairman of the House Subcommittee on Telecommunications and Finance), and H8294 (Statement of Representative Dingell, Ranking Minority Member of the House Commerce Committee). Also, 142 Congressional Record S687-S688 (Statement of Senator Hollings, Ranking Minority Member of the Senate Commerce Committee), S704 (Statement of Senator Ford, Senate Minority Whip), and H1172 (Statement of Representative Fazio, House Democratic Caucus Chairman).

[12]See note 2, and sources cited therein.

guidance in reviewing LEC interconnection agreements for consistency with the requirements of Section 251 of the Act.[13] In contrast, the adoption of uniform national rules regarding interconnection would provide such guidance and thereby prevent the adoption of inconsistent interpretations of these important provisions by state regulators and the Federal courts, a result which would have the undesirable effect of promoting uncertainty and unpredictability in the marketplace.[14]

Additionally, the adoption of uniform national rules will appropriately allow new entrants and incumbent LECs to focus on competing, not on lobbying state legislatures and/or public utility commissions. After a lengthy effort to secure passage of comprehensive telecommunications reform legislation at the Federal level, it would be unfortunate (and of little benefit to anyone but lawyers, lobbyists, and those who oppose or fear competition) if the battle over local competition simply moved from Washington to the states. Continued uncertainty and delay in the implementation of the legislation's local competition provisions would not be in the interest of consumers, and it certaintly would not be in the interest of the TIA's members, because any time that service competition is delayed or obstructed, equipment orders may be reduced, delayed or even canceled.

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[13]NPRM, ¶ 31.

[14]Id. In this regard, the TIA agrees with the Commission's conclusion that the adoption of "varying or inconsistent" decisions with respect to the requirements of Section 251 would be wholly inconsistent with congressional intent.

The adoption of uniform national rules for interconnection will provide telecommunications equipment manufacturers with the certainty and predictability they need to efficiently design and manufacture equipment which meets the increasingly complex needs of carriers and consumers. As the Commission has observed, telecommunications equipment typically has been "provided by national manufacturers selling to a nationwide market . . ."[15] The adoption of uniform national rules for interconnection and unbundling would not only "enhance the ability of new entrants to take advantage of economies of scale and to plan and deploy networks stretching across state and LEC boundaries;"[16] such an approach also would enable manufacturers of equipment used in such networks to realize substantial efficiencies which should significantly reduce the costs incurred by competing carriers and, ultimately, consumers.[17] In this regard, the adoption of uniform national interconnection and unbundling requirements should serve to facilitate the realization of economies-of-scale and/or scope in the design and manufacture of telecommunications equipment and related products.

For these reasons, the TIA supports the adoption of uniform national rules for interconnection and unbundling of incumbent LEC facilities, pursuant to the requirements of Section 251 (c)(2) and (c)(3) of the Communications Act, as amended. The TIA appreciates the Commission's concerns expressed in ¶ 33, and suggests that the Commission can be respectful of state interests

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[15]NPRM, ¶ 79.

[16]Id.

[17]Manufacturers which realize cost benefits by achieving economies-of-scale and/or scope are likely, for competitive reasons, to pass such benefits on to their customers. In the more competitive local service marketplace, incumbent LECs and new entrants will have clear incentives to pass cost savings on to their subscribers as well.

and any unique policy concerns that might exist in particular areas by establishing uniform national rules as a baseline and allowing states flexibility to take additional pro-competitive steps beyond the baseline, so long as such additional steps are consistent with the Commission's rules.

II. Defining Where Interconnection Is "Technically Feasible"

In seeking to establish a flexible, i.e., evolving, definition[18] of where in the network interconnection may be "technically feasible", the TIA urges the Commission to consider several points. First, interconnection should be considered "technically feasible" at any point at which an incumbent LEC has provided or currently provides interconnection to any other carrier or customer.[19] Second, in order to ensure that the definition evolves as technology advances, interconnection should be considered "technically feasible" at any point at which an incumbent LEC provides such interconnection in the future. Third, any party claiming that interconnection would cause harm to the network or that interconnection is not "technically feasible" should, as the Commission has suggested, bear the burden for demonstrating the validity of such claim.[20]

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[18]Any definition of where interconnection may be "technically feasible" must be flexible enough to allow for advances in network technology, since it is not possible to predict with certainty what the network(s) of tomorrow will look like

[19]The Commission acknowledged this point in the NPRM, ¶ 57. Such interconnection also might be considered to be "technically feasible" at similar points in the networks of similarly situated incumbent LECs.

[20]NPRM, ¶ 56 and ¶ 58. With respect to claims of harm to the network, it should reasonably be assumed that equipment which complies with appropriate industry standards and/or generic requirements developed by Bell Communications Research will not cause harm to the network.

III. Unbundling of Network Elements; Access to Network Elements

As added by the 1996 Act, 47 U.S.C. 251 (c)(3) imposes upon incumbent LECs an affirmative duty to "provide ... access to network elements on an unbundled basis at any technically feasible point."[21] Like the definition of "technically feasible," rules regarding unbundling and access to network elements should be flexible enough to evolve as technology advances, yet stable enough to provide a sound basis by which to enable the development of facilities-based competition. Accordingly, the TIA urges the Commission to require incumbent LECs to provide access to a uniform set of network elements, and suggests that the States should be able to require additional unbundling (so long as such additional unbundling requirements are both consistent with FCC requirements and "technically feasible").

Rules governing unbundling and access to network elements should ensure that alternative service providers are able to obtain access to each of the four basic network functions -- loop, switch, transport, and signaling and databases -- provided by incumbent LECs. However, while ensuring alternative service providers access to each network function might make the provision of alternative service possible, it might also create an incentive for alternative service providers to provide that service exclusively or primarily via resale of the incumbent LEC's service because replicating all of the elements need to perform each network function might, at least

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[21]47 U.S.C. 251 (c)(3). The term "network element" is defined (1996 Act § 3 (a)(45)) "a facility or equipment used in the provision of a telecommunications service" and includes "features, functions, and capabilities that are provided by means of such facilities or equipment, including subscriber numbers, databases, signaling systems, and information sufficient for billing and collection or used in the transmission, routing, or other provision of a telecommunications service."

initially, prove economically unfeasible for many alternative service providers.[22] Also, alternative service provider provision of alternative local service through resale of the incumbent LEC's service may allow business and residential consumers of telecommunications service some degree of choice regarding service options, but it will do little to facilitate the deployment of new, advanced telecommunications infrastructure

Keeping in mind that the principle goals of the 1996 Act include the development of facilities-based competition and the "deployment of advanced telecommunications and information technologies," network functions should therefore be further unbundled into their respective component elements (see discussion below), and each component element should be accessible separately.[23] Even if network functions are unbundled into their respective component elements, some elements, i.e., loop distribution, may continue (for reasons relating to economic feasibility, customer preference, etc.) to be provided exclusively by the incumbent LEC. Unbundling in the manner suggested above would allow for the continued use of the incumbent LEC's plant where such use proves to be efficient, while at the same time facilitating, where efficient, alternative

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[22]It is also possible that allowing the bundling of discrete network elements would allow an incumbent LEC seeking to delay or avoid competition to impose significant a financial burden on a new entrants by forcing it to purchase incumbent LEC facilities that it does not need or that it could more cost-effectively obtain from other sources.

[23]As the Commission insightfully observes in the NPRM, "[t]he ability to purchase . . . access only to those network elements a carrier needs allows new entrants to enter the LEC's market gradually, building their own networks over time." NPRM, ¶ 75. The conferees also acknowledged this reality, stating in the Joint Explanatory Statement that "it is unlikely that competitors will have a fully redundant network in place when they initially offer local service, because the investment necessary is so significant. Some facilities and capabilities . . . will likely need to be obtained from the incumbent local exchange carrier as network elements pursuant to new Section 251 " See S. Rep. 230, 104th Congress, 2nd Session, at 148 (1996).

service provider deployment of alternative facilities on a piece-by-piece, or element-by-element basis.[24] In addition, unbundling network functions into their respective component elements will serve to enhance competition in the provision of such elements by alternative manufacturers and suppliers.

As discussed above, incumbent LEC service can be broken down by function into four general categories of elements -- loop, switch, transport, and signaling and databases. Unbundling and making the respective component elements of these functions accessible separately[25] can be achieved as described below.

A. Loop

- Loop Distribution, which is the drop to the customer's premises originating from the subscriber loop carrier ("SLC") pedestal or similar architecture, and terminating at the first point of termination on the customer's premises. In many multiple-dwelling units ("MDUs"), the loop distribution plant is located within the MDU; accordingly, unbundling the loop distribution plant may be the most practical way for alternative providers to reach individual units within an MDU.

- Loop Concentration, which is the SLC or similar equipment configuration at which individual subscriber traffic is multiplexed/de-multiplexed and connected

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[24]The legislative history of the 1996 Act reflects congressional recognition for the need for unbundling network elements into element-specific categories. Senate Commerce Committee Chairman Pressler acknowledged that "access to signaling and databases [is] important if you are going to compete and get into the market." See 141 Congressional Record S8163. Representative J.C. Watts said "As the rules that define facilities-based competition are developed and implemented, I expect those charged with that responsibility to make certain ... [that] all local exchange service providers ... provide line-side interconnection and unbundling of the local loop into its functional *sub-elements* [emphasis added]." See 142 Congressional Record H1174.

[25]All basic network elements and sub-elements require a standard interface for access. Use of the term "standard" is meant to imply recognized or accepted by the industry.

to loop distribution for termination at the customer's premises. The justification for unbundling loop distribution plant also applies to loop concentration plant.

- Loop Feeder, which is the medium on which multiplexed subscriber traffic is carried from the line side of the central office switch to the Loop Concentration facility. Unbundled access to the loop feeder plant may be attractive to cable providers or alternative providers which have their own distribution plant but wish to use the incumbent LEC's concentration and feeder plant to transport traffic to and from the incumbent LEC's switch.

The Commission has proposed to require incumbent LECs to provide local loops as unbundled network elements, and tentatively concluded that it should require further unbundling of the local loop.[26] The TIA endorses the Commission's tentative conclusion and urges that where such unbundling is technically feasible, the local loop be further unbundled into its component elements.[27]

B. Switch

- Switching, which provides the functionalities necessary to connect appropriate lines or trunks to or from a desired communications path. Switching is an essential element in the provision of local exchange service. Some alternative service providers, i.e., Teleport, MFS, already own switches, and some interexchange carrier ("IXC") switches could be modified for use in the provision of local exchange service. Unbundling the switch will permit those who own switches to make use of their existing plant, and allow those who do not own switches to purchase access to incumbent LEC switches. Unbundling will provide a degree of flexibility that will encourage the development of facilities-based local exchange competition and enhance competition in the manufacture and sale of switches.

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[26]NPRM, ¶ 94 and ¶ 97.

[27]However, the TIA urges the Commission to recognize that there may be material differences between technologies and implementations of technologies used to provide the same functionality. Accordingly, interconnection which is technically feasible for one incumbent LEC may not be technically feasible for another which is using a different technology to provide the same functionality.

- Operator Systems, which provide for the processing and recording of special toll calls, public telephone toll calls, and other types of calls requiring operator assistance. The justification for unbundling switching also applies to operator systems.

C. Transport

- Dedicated Transport Links, which are communications channels (trunks) between two switching systems (LEC to IXC, or incumbent LEC to alternative service provider) on which all traffic terminates to the same carrier.

- Common Transport Links ("CTLs"), which are communications channels (trunks) between two switching systems on which traffic is co-mingled to include multiple IXCs as well as LEC traffic. CTLs originate at an incumbent LEC End Office and terminate at a tandem switch.

- Tandem Switching, which provides the functionalities necessary to connect trunks for the purpose of completing inter-switch calls.

Unbundled dedicated transport is already available to IXCs under LEC access tariffs; therefore, there is no reason why this capability could not be made available to other carriers. The Commission acknowledged this by proposing that incumbent LECs provide access to unbundled transport facilities as network elements.[28] The TIA supports this proposal and urges the Commission to require transport facilities to be further unbundled into their component elements.

D. Signaling and Databases

- Signaling Links, which are transmission facilities in a signaling network which carry all out-of-band signaling traffic between the End Office and Signal Transfer Point, the Tandem Switch and Signal Transfer Point, the Signal Transfer Point and Signal Control Point, and Signal Transfer Point to Signal Transfer Point.

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[28]NPRM, ¶ 104.

- Signal Transfer Point ("STP"), which is a network element which serves as a "signaling switch" and connects signaling links in a manner that permits the transfer of signaling messages between other network elements.

- Signal Control Point ("SCP"), which is a node in the signaling network to which informational requests for service handling (routing) are directed and processed. The SCP may contain service logic and customer specific information required to process individual requests.

The Commission has tentatively concluded that incumbent LECs must unbundle their signaling systems and databases.[29] The TIA supports this conclusion.

IV. Disclosure of Technical Changes

Because manufacturers must have reasonable lead time to make design changes, access to information regarding changes in network design or network configuration is every bit as important to the TIA's members as it is to alternative service providers seeking interconnection with incumbent LEC networks. Accordingly, any rules adopted regarding the disclosure of technical changes should guarantee that all manufacturers are able to access such information on a reasonable, timely, and non-discriminatory basis.

Section 251 (c)(5) of the Act requires incumbent LECs to provide "reasonable public notice of changes in the information necessary for the transmission and routing of services using that local exchange carrier's facilities or networks, as well as of any other changes that would affect the interoperability of those facilities and networks."[30] In its NPRM, the Commission proposes to

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[29]NPRM, ¶ 107.

[30]47 U.S.C. 251 (c)(5).

require incumbent LECs to provide notice regarding the date changes are to occur, the location of changes, the type of changes, and the potential impact of such changes.[31] These categories represent the minimum information necessary regarding technical changes to an incumbent LEC's network, and the TIA supports the Commission's proposal.

With respect to notification of such technical changes, the TIA supports the notion that there are voluntary practices, i.e., provision of information through industry fora, through industry publications, or via the Internet, which might sufficiently ensure that reasonable access to information is afforded interested parties. However, to ensure that such reasonable access becomes a standard industry practice, the Commission should, on a transitional basis, require incumbent LECs to file with the Commission information advising the Commission and other interested parties where such information can be located. Such a requirement would be consistent with the disclosure provisions included of 47 U.S.C. 273 (c)(1) and 47 U.S.C. 273 (c)(4).

In any rules requiring such notification, the Commission should take into account the need to safeguard manufacturers' proprietary interests. Notifications of technical changes will involve disclosure of interfaces which will often contain intellectual property of significant value.

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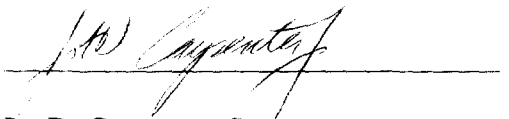
[31]NPRM, ¶ 190

In sum, as the Commission writes rules to implement the requirements of 47 U.S.C. 251 and 47 U.S.C. 252, the TIA urges it to:

- develop uniform national rules for interconnection and unbundling so as to promote predictability and certainty and facilitate market-entry;
- adopt a flexible definition of what constitutes a "technically feasible" point for interconnection;
- prescribe unbundling requirements that will enable and encourage the development of facilities-based competition in the provision of local exchange service; and
- adopt rules requiring reasonable, timely, and non-discriminatory access to information regarding technical changes in incumbent LEC network design or configuration

Adoption of uniform national rules for interconnection, as described above, will advance the pro-competitive objectives of the 1996 Act, expedite the development of facilities-based local telecommunications service competition, create significant new opportunities for manufacturers of telecommunications equipment, and facilitate the rapid development of advanced telecommunications technologies and services that will benefit American businesses and consumers.

Respectfully submitted,



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May 16, 1996